

WHAT IS CLAIMED IS:

1. A polymer composition containing a polymer and a flame retardant, wherein the flame retardant comprises a polymer having
5 a flame-retardant moiety in a side chain thereof.

2. A polymer composition according to claim 1, wherein the flame-retardant moiety is a compound that, when it is heated, exerts at least one type of reaction selected from a group consisting
10 of endothermic decomposition reaction, radical-compound-producing reaction, inert-gas-producing reaction and incombustibles-producing reaction.

3. A polymer composition according to claim 1 or 2, wherein the
15 thermal decomposition temperature of the polymer having a flame-retardant moiety in a side chain thereof is higher than 100°C and lower than the thermal decomposition temperature of the polymer.

4. A polymer composition according to any one of claims 1 to
3, wherein the thermal decomposition temperature of the polymer
having a flame-retardant moiety in a side chain thereof is in a
5 range that is higher than 300°C and lower than 550°C.

5. A polymer composition according to any one of claims 1 to
4, wherein the melting point or the softening temperature of the
polymer having a flame-retardant moiety in a side chain thereof
10 is equal to or lower than the softening temperature of the polymer.

6. A polymer composition according to any one of claims 1 to
5, wherein the polymer having a flame-retardant moiety in a side
chain thereof is contained at a ratio of five (5) part by weight
15 or more and 50 part by weight or less to 100 part by weight of
the polymer.

7. A polymer composition according to any one of claims 1 to

6, wherein the polymer having a flame-retardant moiety in a side chain thereof has a heterocyclic compound in which nitrogen is the heteroatom.

5 8. A polymer composition according to claim 7, wherein the heterocyclic compound contains at least one kind of compound selected from a group consisting of hydantoin, dimethylhydantoin, triazine, diaminotriazine, acetguanamine, aminotriazole, aminopyridine, isocyanuric acid, imidazole, methylimidazole, 10 triallylcyanulate, triallylisocyanulate, pyrazine, melamine, nucleic acid base, nucleotide and nucleoside.

9. A polymer composition according to any one of claims 1 to 8, wherein the polymer having a flame-retardant moiety in a side 15 chain thereof is an addition polymer.

10. A polymer composition according to claim 9, wherein the polymerizing groups in the addition polymer contain at least one

kind selected from a group consisting of vinyl, allyl, acrylic and methacrylic groups.

11. A polymer composition according to any one of claims 1 to
5 10, wherein the polymer contains a biodegradable polymer.

12. A polymer composition according to any one of claims 1 to
11, wherein the polymer is produced from materials originated from
plants.

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13. A polymer composition according to claim 12, wherein the
polymer is a polylactic acid-based polymer.

14. A polymer composition according to any one of claims 1 to
15 10, wherein the polymer contains polystyrene.

15. A polymer composition according to any one of claims 1 to

10, wherein the polymer contains unsaturated polyester.

16. A polymer composition according to any one of claims 1 to
15, wherein the polymer composition has thermoplasticity and can
5 be injection-molded.

17. A molded product made of polymer composition according to
any one of claims 1 to 16.

10 18. A molded product according to claim 17, wherein the molded
product contains the flame-retardant moiety in the vicinity of
its surface at a density higher than the density inside it.

19. A housing for electric appliances made of the polymer
15 composition according to any one of claims 1 to 16.

20. A method for manufacturing a polymer composition having a

flame retardancy, comprising the steps of:

preparing a polymer, and a polymerizing compound containing a flame-retardant moiety; and

producing a polymer having the flame-retardant moiety in a side chain thereof by heating and kneading the high-molecule material and the polymerizing compound.

21. A method for manufacturing a polymer composition according to claim 20, wherein the flame-retardant moiety is a compound that, when it is heated, exerts at least one type of reaction selected from the reaction type group consisting of endothermic decomposition reaction, radical compound-producing reaction, inert gas-producing reaction and incombustibles-producing reaction.

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22. A method for manufacturing a polymer composition according to claim 21, wherein the polymerizing compound contains a heterocyclic compound in which nitrogen is the heteroatom.

23. A method for manufacturing a polymer composition according to any one of claims 20 to 22, wherein the high-molecule material contains a biodegradable polymer.

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24. A method for manufacturing a polymer composition according to any one of claims 20 to 22, wherein the polymer contains polystyrene.

10 25. A method for manufacturing a polymer composition according to claims 24, wherein the polymer is rubber-mixed polystyrene and the polymerizing compound is vinylldiaminotriazine.